

ATTORNEY DOCKET NO. P21-US

IN THE CLAIMS:

Please amend claims 3, 12, 55, 56, 61, 62, 76, and 78 as follows; and

Please cancel claims 11, 24, 57-60, 63-66, 75-76, and 83 without prejudice:

1. (previously presented) A micromechanical device, comprising:
a movable portion and a flexible portion, the flexible portion comprising a nitride compound and a late transition metal, wherein the nitride compound and late transition metal are in the same film or layer and wherein the film or layer is a ternary or higher system; wherein the nitride compound is a nitride of silicon, boron or aluminum.
2. Cancelled.
3. (currently amended) The micromechanical device of claim 1, wherein the nitride compound is a silicon nitride or boron nitride.
4. (original) The micromechanical device of claim 1, wherein the late transition metal is selected from the groups 8B or 1B of the periodic table.
5. (original) The micromechanical device of claim 1, wherein the late transition metal is a ferromagnetic metal.
6. (original) The micromechanical device of claim 1, which is a MEMS sensor or actuator.
7. (original) The micromechanical device of claim 1, wherein the late transition metal is a noble metal.
8. (original) The micromechanical device of claim 1, wherein the late transition metal is Co, Ni, Pd, Pt, Ag or Au.
9. (previously presented) The micromechanical device of claim 1, wherein the nitride comprises less than 0.1% oxygen.

ATTORNEY DOCKET NO. P21-US

10. (previously presented) The micromechanical device of claim 1, wherein the nitride is an oxynitride that comprises up to 10% oxygen.

11. cancelled

12. (currently amended) The micromechanical device of claim 1, comprising a substrate, the [[a]] movable element formed in or on the substrate and a hinge for allowing movement of the movable element relative to the substrate.

13. (original) The micromechanical device of claim 12, wherein the substrate is a semiconductor or light transmissive substrate.

14. (original) The micromechanical device of claim 12, wherein the movable element and/or the hinge are formed of the nitride compound and the late transition metal.

15. (original) The micromechanical device of claim 14, further comprising posts or walls for connecting the movable element to the substrate via the hinge.

16. (original) The micromechanical device of claim 12, wherein the hinge is a sputtered hinge.

17. (original) The micromechanical device of claim 12, wherein the device is a micromirror device with said movable element having a reflective layer thereon or therein.

18. (original) The micromechanical device of claim 12, which is a sensor.

19. (original) The micromechanical device of claim 17, wherein the reflective layer comprises Al, Ti or Au.

20. (original) The micromechanical device of claim 17, wherein the micromirror device is a light beam steering device.

ATTORNEY DOCKET NO. P21-US

21. (previously presented) The micromechanical device of claim 20, wherein the light beam steering device is within an optical switch.

22. (original) The micromechanical device of claim 17, wherein the micromirror device is part of a micromirror array in a display.

23. (original) The micromechanical device of claim 22, wherein the display is a direct view or projection display.

24 – 54 Cancelled

55. (Currently Amended) A micromechanical device; comprising:

a movable portion that is capable of movement due to a flexible portion that comprises a late transition metal and an element from groups 3A to 6A of the periodic table and with the flexible portion being formed by chemical or physical vapor deposition, wherein the late transition metal and the element from groups 3A to 6A of the periodic table are in the same film or layer and wherein the film or layer is a ternary or higher system; wherein the late transition metal is a noble metal and wherein the flexible portion further comprises more than one element from the first two rows of groups 3A to 6A; and wherein one of the two or more elements is nitrogen.

56. (currently amended) The micromechanical device of claim 55, wherein the noble metal of the late transition metal is selected from groups 8B or 1B of the periodic table.

57-60 cancelled

61. (currently amended) The micromechanical device of claim 55 60, wherein another of the two or more elements is aluminum, boron, silicon carbon or oxygen.

62. (currently amended) The micromechanical device of claim 61, wherein the noble metal of the late transition metal is a ferromagnetic metal.

ATTORNEY DOCKET NO. P21-US

63-70 Cancelled

71. (previously presented) A micromechanical device, comprising:

a flexible hinge comprising a nitride compound and a late transition metal, wherein the nitride compound and late transition metal are in the same film or layer and wherein the film or layer is a ternary or higher system deposited by chemical or physical vapor deposition, wherein the nitride compound is a nitride of silicon, boron or aluminum.

72. (previously presented) The micromechanical device of claim 71, wherein the flexible hinge is attached to a movable portion that is operable to be actuated by an electrostatic force derived from an electrostatic field established between the movable portion and an electrode.

73. (previously presented) A micromechanical device selected from a micromirror, a MEMS switch and a MEMS sensor, comprising:

a movable portion and a flexible hinge to which the movable portion is attached such that the movable portion is operable to move, wherein the flexible hinge comprise a ceramic compound and a late transition metal, wherein the ceramic compound and late transition metal are in the same film or layer and wherein the film or layer is a ternary or higher system deposited by chemical or physical vapor deposition; wherein the ceramic compound is a nitride compound that is a nitride of silicon, boron or aluminum.

74. (previously presented) The micromechanical device of claim 73, wherein the flexible hinge is attached to a movable portion that is operable to be actuated by an electrostatic force derived from an electrostatic field established between the movable portion and an electrode.

75-76 cancelled

77. (previously presented) A micromechanical device, comprising:

a movable portion and a flexible hinge to which the movable portion is attached such that the movable portion is operable to move, and wherein the flexible hinge comprises a ceramic

ATTORNEY DOCKET NO. P21-US

compound and a late transition metal, wherein the ceramic compound and late transition metal are a ternary or higher system within a common layer, wherein the ceramic compound is a nitride compound which is a nitride of silicon, boron or aluminum.

78. (currently amended) The micromechanical device of claim 77, wherein the flexible hinge is attached to ~~[[a]]~~ the movable portion that is operable to be actuated by an electrostatic force derived from an electrostatic field established between the movable portion and an electrode.

79. (previously presented) A micromechanical device, comprising:
a flexible portion comprising a nitride compound having an element from groups 3A to 6A of the periodic table and a late transition metal, wherein the nitride compound and late transition metal are in the same film or layer and wherein the film or layer is a ternary or higher system deposited by chemical or physical vapor deposition, wherein the late transition metal is a noble metal.

80. (previously presented) The micromechanical device of claim 79, wherein the flexible portion is a flexible hinge that is operable to be actuated by an electrostatic force derived from an electrostatic field established between the movable portion and an electrode.

81. (previously presented) The micromechanical device of claim 79, wherein the nitride compound is silicon nitride.

82. (previously presented) A micromechanical device, comprising:
a movable portion and a flexible portion, the flexible portion comprising a nitride compound and a late transition metal, wherein the nitride compound and late transition metal are in the same film or layer and wherein the film or layer is a ternary or higher system; and wherein the late transition metal is noble metal.

83. Cancelled